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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,507	12/31/2003	Weipeng Paul Yan	1021-041US01	9232

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ART UNIT	PAPER NUMBER
2166	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/750,507	YAN ET AL.
	Examiner	Art Unit	
	Usmaan Saeed	2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 October 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>31 December 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>6/19/07</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   Receipt of Applicant's Amendment, filed 10/02/2006 is acknowledged. Claims 13-

33 have been amended and previous claims 10-34 have been renumbered as 9-33.

Drawings

2.   In view of the amendments received on 10/02/2006, the drawing rejections are

hereby withdrawn.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 12-19 and 23-30 are rejected under 35 U.S.C. 102(e) as being

anticipated by **Mclean et al. (Mclean** hereinafter) (U.S. PGPUB No. 2003/0018506).

With respect to claim 1, **Mclean** teaches **a method for dynamically initializing a view for a streaming database system, comprising:**

"accessing at least one stream of events" as a series of related events are referred to herein as an "event stream." The database 104 may store parameters relating to events, benefits and value streams in a matrix referred to herein as the event matrix (**Mclean** Paragraph 0079).

"materializing a view from said stream, wherein said view is dynamically defined from said stream of events from said streaming database system" as FIG. 11 illustrates an event matrix data structure 400 for storing assumptions (e.g., assumed variables) and their related events in accordance with the present invention when operating in value creation mode. As stated previously, the event matrix 400 stored in the database 104 (FIG. 1A) is a relational database in which assumptions, events, and their related probabilities are collected for both financial and non-financial value streams (**Mclean** Paragraph 0164). Exemplary record fields for the customer object record 908 may include customer information, such as Name, Address, Contact information and other customer details, and event relationship identifiers that operate to dynamically link appropriate events stored in the event matrix 901 with particular object records stored in the object database 902 (**Mclean** Paragraph 0246).

"processing a plurality of view snapshots from said view" as FIGS. 25A-C are respective diagrammatic views of object records that may be stored in the above described object database module 902. FIG. 25A is a diagrammatic view of a customer object record 908 that may be stored in the object database 902 (**Mclean** Paragraph

0246). FIG. 25B is a diagrammatic view of a product object record 909 that may be

stored in the object database 902 (**Mclean** Paragraph 0247). FIG. 25C is a

diagrammatic view of a financial object record 910 that may be stored in the object

database 902 (**Mclean** Paragraph 0248). Examiner interprets the diagrammatic views

as view snapshots.

"generating an initialized view in accordance with said view snapshots,

wherein said initialized view incorporates new events of said stream" as if a

previously anticipated event occurs, then the related assumption may be modified in the

matrix 400. The assumption view is shown in FIG. 11. In an "event view," the system

100 focuses first on events and, then, for each event shows the "affected assumptions."

The event view of the event matrix 400 is shown in FIG. 13 (Mclean Paragraph 00164 &

0165). Examiner interprets the modified matrix 400 in fig 13 as initialized view.

With respect to claim 2, **Mclean** teaches **"the method as recited in Claim 1**

wherein said initialized view comprises a plurality of row data structures" as

Figure 13 (Mclean Figure 13).

With respect to claim 3, **Mclean** teaches **"the method of Claim 1, wherein said**

view is a stateful view resulting from a stateful stream, said stateful view having a

bounded number of rows" as Figures 25 A-C (Mclean Figure 25 A-C).

With respect to claim 4, **Mclean** teaches **"the method of Claim 3, wherein each of said view snapshots of said stateful view comprise a state of said stateful view including events existent at said materializing of said stateful view"** as FIGS. 25A-C are respective diagrammatic views of object records that may be stored in the above described object database module 902. FIG. 25A is a diagrammatic view of a customer object record 908 that may be stored in the object database 902 (**Mclean** Paragraph 0246). FIG. 25B is a diagrammatic view of a product object record 909 that may be stored in the object database 902 (**Mclean** Paragraph 0247). FIG. 25C is a diagrammatic view of a financial object record 910 that may be stored in the object database 902 (**Mclean** Paragraph 0248). These view snapshots of stateful views include events from the materialized view/matrix. **"and events accessed after said materializing of said stateful view at a particular time"** as figure 11 and 13 (Figure 11 & 13). These figures show materialized views at time t1 and t.

With respect to claim 5, **Mclean** teaches **"the method of Claim 2, wherein said view is a stateless view resulting from a stateless stream, said stateless view having an unbounded number of rows"** as Figure 13 (**Mclean** Figure 13).

With respect to claim 6, **Mclean** teaches **"the method of Claim 5, wherein each of said view snapshots of said stateless view comprise a state of said stateless view including events existent at said materializing of said stateless view, including a last event processed during said materializing of said stateless view"**

as Figure 13 (**Mclean** Figure 13). Stateless view in figure 13 comprises events from

materializing of view in figure 11. Examiner interprets the event 1-3 as last event to be

processed I the view.

With respect to claim 7, **Mclean** teaches **"the method of Claim 1, further**

comprising: processing a plurality of view snapshots by maintaining a sequence

of a plurality of preceding current view snapshots" as Figure 23 (**Mclean** Figure

23). Object database 902 contains plurality of snapshots. Examiner interprets past

events from event matrix 901 containing preceding view snapshots in the database 902.

With respect to claim 8, **Mclean** teaches **"the method of Claim 7, further**

comprising: applying a batch set of events to said processing of said view

snapshots, wherein each event of said batch set has a corresponding one of said

view snapshots" as Figure 24 A-B & 25 A-C (**Mclean** Figure 24 A-B & 25 A-C).

Examiner interprets 906a future events and 906b past events in figure 24A as batch of

events. These events are being applied to and has a corresponding view snapshot as

shown in figures 25 A-C.

Claims 12-19 and 23-30 are same as claims 1-8 and are rejected for the same

reasons as applied hereinabove.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

Claims 9-10, 20-21, and 31-32 are rejected under 35 U.S.C 103(a) as being

unpatentable over **Mclean et al.** (U.S. PGPUB No. 2003/0018506) as applied to claims

1-8, 13-19 and 23-30 above in view of **Zwilling et al. (Zwilling** hereinafter) (U.S.

PGPub No. 2004/0267828).

With respect to claim 9, **Mclean** teaches **"the method of Claim 1, wherein said**

generating of said initialized view is configured to accomplish a recovery of a

view state" as FIG. 3 illustrates a flow diagram 300 showing determination of outcomes

in value creation mode based upon different assumptions. For example, the CPU 102

can be controlled to determine the outcomes 226 (FIG. 2) from the groups of scenarios

220 (FIG. 2) in accordance with the flow diagram 300 of FIG. 3. In a state 302, data

relevant to the various scenarios may be retrieved from the database 104 (FIG. 1A) to

the CPU 102 (FIG. 2). Then, in a state 304, the data for the assumptions and their

related events may be assembled into scenarios (**Mclean** Paragraph 0092).

Mclean teaches the elements of claim 9·as noted above but does not explicitly

teaches **"recovery of a view."**

However, **Zwilling** discloses **"recovery of a view"** as Recovering a Database

View. When the database server restarts after it is shut down (either normally or

abnormally), the database view must be reinitialized. In order to do so, the side page

tables, which have been stored in memory, must be reinitialized (**Zwilling** Paragraph

0057).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teachings of the cited references because

Zwilling's teaching would have allowed **Mclean** to provide a ways to view a database

which can be created quickly, and is persistent after a database server restart.

With respect to claim 10, **Mclean** teaches **"the method of Claim 1, wherein**

said generating of said initialized view is configured to accomplish a re-enabling

of a view after a disabling of a view" as if a previously anticipated event occurs, then

the related assumption may be modified in the matrix 400. The assumption view is

shown in FIG. 11. In an "event view," the system 100 focuses first on events and, then,

for each event shows the "affected assumptions." The event view of the event matrix

400 is shown in FIG. 13 (Mclean Paragraph 00164 & 0165). Examiner interprets the

modified matrix 400 in fig 13 as initialized view.

Mclean teaches the elements of claim 10 as noted above but does not explicitly

teach **"re-enabling of a view after a disabling of a view."**

However, **Zwilling** discloses **"re-enabling of a view after a disabling of a**

view" as Recovering a Database View. When the database server restarts after it is

shut down (either normally or abnormally), the database view must be reinitialized. In

order to do so, the side page tables, which have been stored in memory, must be

reinitialized (**Zwilling** Paragraph 0057). Examiner interprets the reinitialized view as re-

enabled view.

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teachings of the cited references because

Zwilling's teaching would have allowed **Mclean** to provide a ways to view a database

which can be created quickly, and is persistent after a database server restart.

Claims 20-21 and 31-32 are same as claims 9-10 and are rejected for the same

reasons as applied hereinabove.

Claims 11, 22 and 33 are rejected under 35 U.S.C 103(a) as being unpatentable

over **Mclean et al.** (U.S. PGPUB No. 2003/0018506) as applied to claims 1-8, 13-19

and 23-30 above in view of **Homayoun Yousefi'zadeh** (**Homayoun** hereinafter) (U.S.

PGPub No. 2004/0030739).

With respect to claim 11, **Mclean** teaches **"the method of Claim 1, wherein

said generating of said initialized view is configured to accomplish a load

balancing of a view maintenance process"** as if a previously anticipated event

occurs, then the related assumption may be modified in the matrix 400. The

assumption view is shown in FIG. 11. In an "event view," the system 100 focuses first

on events and, then, for each event shows the "affected assumptions." The event view

of the event matrix 400 is shown in FIG. 13 (Mclean Paragraph 00164 & 0165).

Examiner interprets the modified matrix 400 in fig 13 as initialized view.

Mclean teaches the elements of claim 11 as noted above but does not explicitly

teaches, **"to accomplish a load balancing of a view maintenance process."**

However, **Homayoun** discloses **"to accomplish a load balancing of a view"**

as to one of said multiple database servers being based on a metric such as a load

balancing scheme along with a remote replication scheme to preserve the respective

view of data of said multiple database servers (**Homayoun** Paragraph 0010).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teachings of the cited references because

Homayoun's teaching would have allowed **Mclean** to provide specific load-balancing

techniques for assigning queries to respective multiple database servers 24, to, and to

balance respective loads of the multiple database servers 24.

Claims 22 and 33 are same as claims 11 and are rejected for the same reasons

as applied hereinabove.

Response to Arguments

5.   Applicant's arguments filed 10/02/2006 have been fully considered but they are

not persuasive.

Applicant argues that **McLean** does not teach **"stream of events"** as described

in applicant specification, "an event can be one of a number of changes in a value in a

transactional system that must be captured for the purpose of monitoring the value."

First of all examiner would like to point out that the claims are given the broadest

reasonable interpretation during examination and limitations appearing in the specification but

not recited in the claim are not read into the claim (See M.P.E.P. 2111 [R-I]).

In response to the preceding arguments examiner respectfully submits that

McLean teaches **"stream of events"** as a series of related events are referred to

herein as an "event stream." The database 104 may store parameters relating to

events, benefits and value streams in a matrix referred to herein as the event matrix

(**Mclean** Paragraph 0079).

Further **McLean** teaches shortcomings of conventional financial accounting

techniques by measuring and reporting future value streams, not just historical

transactions, measuring and reporting value streams for all key stakeholders, including

both financial and non-financial value; and measuring and reporting value creation on a

continuous, real-time basis (**McLean** Paragraph 0024). The value realization context

permits selection of one of a number of value realization outcome displays, including

outcome displays that provide information similar to that provided by conventional

transaction-based accounting systems. However, in accordance with the invention, the

outcome displays are provided by applying an appropriate filter and calculation engine

to the event-based information in the database to generate the selected report (**McLean**

Paragraph 0083).

This is followed by an analysis of the changes in events and assumptions that

account for the calculated difference. In this illustration, the difference is accounted for

by changes in 8 events or related assumptions: Five changes in events or related

assumptions caused PV to be higher than previously calculated: (1) expected increase

in future sales for BioInformatics Tool #4; (2) expected increase in biotech sales world

wide (which will also results in an increase in Company A sales); (3) a revision upward

of the expected sales for Biotech Drug #26; (4) an upward increase in general sales

growth based on the world sales increases the previous; and (5) slightly higher

investment income performance (**McLean** Paragraphs 0193 and 0194).

Therefore these lines teach that the changes are being monitored in the

transactional systems.

Conclusion

6.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Contact Information

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Usmaan Saeed whose telephone number is (571)272-

4046. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hosain Alam can be reached on (571)272-3978. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Usmaan Saeed
Patent Examiner
Art Unit: 2166

Leslie Wong
Primary Examiner

US
June 20, 2007

MOHAMMAD ALI
PRIMARY EXAMINER